

Extesionalism and Veridicalism

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Abstract:

Many philosophers hold that we experience the passing of time. It is by far the most popular view concerning temporal experiences of time. There is a small minority of philosophers, veridicalists, who reject the phenomenology of time passage. But are there accounts of temporal experiences that could support this view? I think so. I will examine one particular view of veridicalism, by Christopher Hoerl, and examine how extensionalism, a view about our temporal experiences and how we perceive change, can offer such account. With extensionalism, and a few modifications to the general debate, I think veridicalism is a strong contender against B-theorist philosophers, philosophers who reject an objective passing of time, who do accept the phenomenology of time passage. To build a case for the veridicalist view, I will rely on extensionalism as an account of the temporal present and as an account of how we become aware of change. I will, also, suggest there is a reasonable case to be made for the veridicalist view depending on how we view the temporal present in relation to the metaphysics of the B-theory.

Key Words: Veridicalism, Illusionism, Extensionalism, Temporal Passage

Extensionalism and Veridicalism

In my dissertation, I intend to answer the question, can extensionalism properly accommodate the veridicalist rejection of temporal passage? My question intersects between several fields, ranging from the metaphysics of time, the metaphysics of objects existing in time, the philosophy of perception, views about our temporal experiences, and views about how we temporally experience time-flow. Indeed, many of these fields are interesting in their own right, but my dissertation will primarily focus on the metaphysics of time, a particular view of our temporal experiences known as extensionalism, and if we experience time-flow. There is much to discuss within this framework, but I have been quite deliberate with my question and topics of discussion. Veridicalism is a B-theory view of time, the view time is unchanging, and veridicalists reject that we can have any sensation of time-flow (Baron et. al, 2015, p. 562). Veridicalists hold that *all* we can be consciously aware of is change, and it is by far the least favored view concerning time passage (Ibid.). However, I think there is a reasonable case to be made for the veridicalist view. The veridicalist view I will focus on is by, Christopher Hoerl, and will be explicated thoroughly in section one. I think that extensionalism is a perfect candidate and a natural fit to supplement many of the needs of veridicalists. Accordingly, much of my dissertation will be slanted with a favorable view of veridicalism and will focus on extensionalism as an aid to ward off sensations of temporal passage and time-flow.

I intend to answer my question in the affirmative. To met the objective of my dissertation, I have divided it into three sections. In the first section, I provide the relevant background information for the debate and will argue against a particular type of illusionism. I will, also, suggest that there is a sense in which we can be aware of time's passing while rejecting time-flow and temporal passage. In the second section, I will provide an exposition of extensionalism that compliments the veridicalist view. I will argue that this construction of extensionalism is a natural fit for veridicalists. In section three, I will discuss illusionism and veridicalism from a different approach than is typically taken, beginning from the temporal present while focusing on its relation to the metaphysics of time. My discussion here will serve as what I think is more persuasive rationale than what is typically emphasized for the veridcialist view.

Section I:

A) Metaphysics of Time, Time Passage Thesis, Veridicalism & Illusionism

To begin, I must briefly provide context for the current debate and elaborate on the metaphysics of the A-theory and B-theory of time. A-theorists hold that when an object exists in time, it is not just the where that it exists, but also the when. Typically, A-theorists posit at least one mind-independent time property, i.e. the present, or they posit only mind-independent privileged statuses of time in lieu of time properties, i.e. the present and past, to explain time passage (Williams, 1992, p.126; Dainton, 2010, pp. 68-69). Time passes on the A-theory and states of affairs in the world changes because of the transitory nature of the mind-independent properties and privileged statuses of time (Dainton 2010, p. 7). As the opposing view, B-theorists reject time passage and hold that there are no mind-independent time properties, but rather that time is a dimension by virtue of which things ‘change’ (Ibid., pp. 27, 38). Time exists, contrary to A-theory views, as an all existing and never changing dimension with events occurring in relational terms of earlier and later (Ibid., p. 35). This is not to say that there are no *psychological* tensed-beliefs used to describe time, i.e. x is present to me now, but rather that the psychological beliefs do not correspond to tensed, mind-independent time properties (Ibid.). To make this move, B-theorists hold that psychological terms of time are tokens of a particular event - while a subject forms a token belief of an event, such as x occurred yesterday, the token belief is compatible with the B-theory view in virtue of the *subject* holding the token belief (Ibid., pp. 33, 35).

For purposes in my dissertation, I will assume the B-theory, in line with many philosophers who hold this view (Baron et. al. 2015, p. 562). What is pertinent here is that the two distinct metaphysical views of time relate to change in different ways, but the B-theory can accommodate many of the purported A-theory properties in terms of psychological tokens. With both of these views in mind, we can ask, how does time passage relate to the B-theory view? Put simply, through appeals to introspection. The argument that follows, modified for the B-theory, elucidates the introspective elements in question:

- i) Introspection suggests we have experiences of temporal passage.
- ii) If we have experiences of temporal passage, the best explanation for this lies on time passage being a psychological, i.e. mind-dependent, phenomenon.

Conclusion: Introspection on temporal passage suggests a psychological phenomenon.

(Baron et. al. 2015, p. 561).

It should be noted that there are two distinct explanatory tasks that underpin the argument from introspection. I will expand on this in section three but suffice to say here that this is so because of the B-theorist rejection of the A-theory metaphysics. The first is the phenomenological arrow, also known as

the temporal present. The thought behind the phenomenological arrow is that consciousness is asymmetric, in that we cannot be aware of the past or future, and is confined to the ‘present’ as it possesses an immanent direction, pointed forward as we seemingly progress to the future (Dainton, 2010, pp. 29, 116-117). The phenomenological arrow is necessary for temporal passage, lest consciousness not be confined nor asymmetric at all. The second explanatory task is explaining our indirect awareness, i.e. something we can’t directly perceive, of temporal passage: that time seems to *flow* to us (Braddon-Mitchell, 2014, p. 212). Events apparently pass through time, sometimes described as a sensation of temporal passage, flowing from the future to the present, then receding into the past (Paul, 2010, p. 333). B-theorists respond to the argument from introspection in two different ways, dividing themselves into either the veridicalist or illusionist camps. I will handle each in turn, but will begin with the illusionist view.

Illusionists accept both the first and second premises of the argument from introspection, accepting that introspection suggests temporal passage. In doing so, illusionists adopt both explanatory tasks, of the phenomenological arrow and temporal passage. Illusionism is by far the most favored theory amongst B-theorists (Baron et. al, 2015, p. 561). Now, the illusionists I am concerned with in this section are what I will term Dainton-illusionists. These types of illusionists hold that temporal passage is explained through, and is inextricable with, our short-term, dynamic perceptual experiences of change (Dainton, 2011, pp. 391, 398-399, 404-405; Dainton, 2012, pp. 127-128).¹ Dainton-illusionists invoke a *sui generis* sensation of ‘flow’ that accompanies dynamic experiences of change to explain temporal passage (Dainton, 2011, pp. 404-405.; Dainton, 2010, p. 116). The claim can be either an error-theory or a projectionist theory. I will not commit Dainton-illusionists to either, as I think my forthcoming argument applies to both.

The second camp is the veridicalist camp. Veridicalists have substantially different intuitions about temporal passage and reject the first premise, thus rejecting temporal passage. In doing so, veridicalists reject the explanatory task of temporal passage and accept the phenomenological arrow task. One way veridicalists do this, as argued by, Christopher Hoerl, is by suggesting that the typical view of temporal passage rests on an error in the types of change we experience (Hoerl, 2014, pp. 196-197). Hoerl suggests that we are aware of change in two different ways, through short-term dynamic experience of change and through awareness of discrete changes over clock-time (Ibid.). According to Hoerl, the structural differences between the two types of change has caused philosophers to conflate one’s awareness of the apparent ‘flow’ of dynamic experiences of change with the flow of temporal passage (Ibid.) Hoerl thinks Dainton-illusionists are guilty of (Ibid.). In the forthcoming subsections, I will provide a more in-depth analysis of the two types of change and defend Hoerl’s argument.

¹ See appendix i for a brief discussion about another interpretation of Dainton’s view.

B) Phenomenological Datum of Change

If we introspect on our awareness of change, we can find phenomenological datum to explicate the types of change we are aware of. Introspection suggests two types of change, which are demarcated clearly through a passage from C.D. Broad:

“...to see a second-hand moving is quite a different thing from ‘seeing’ that an hour-hand has moved. In the one case we are concerned with something that happens within a single sensible field; in the other we are concerned with a comparison between the contents of two different sensible fields”

(Broad, 1923, pp. 351-352).

While attending to the hour-hand of a clock, one is aware of change which I will refer to as changes of mere variation. Mere variation change is an awareness of change at discrete moments through clock-time, where one becomes aware of the change through inference and recollection (Phillips, 2011, pp. 813-814; Hoerl, 2013, p. 388).

Contrasting with mere variation change, as the type of change my dissertation will focus on, is the dynamic experience of the second-hand. What is clear from Broad’s example is that we are simply aware of short-term change as it unfolds before us. There is nothing inferential about the short-term change we are aware of, and we are aware of the change as a dynamic experience (Le Poidevin, 2007, p. 87). The second-hand moves in a uniform manner, with a particular spatial order and structure, without pause into each new spatial location it will occupy (Hoerl, 2013, p. 388). While attending to the second-hand’s movement, one is simply aware of it changing spatial locations, as the second-hand changes in a uniform manner, with structure and order (Ibid.). Dynamic experiences of change have a distinct phenomenology, clearly contrasted with the hour-hand case. While aware of the second-hand’s movement, it seems to one that the change is occurring before them, that they are *perceiving* the change (Le Poidevin, 2007, p. 87). There seems to be some ambiguity as to whether or not every short-term experience of change is a dynamic experience, as Ian Phillips intimates this quite strongly at some points (2008, p. 199). However, I will avoid this for purposes here and maintain that there is a distinctness with this type of change, where one is simply aware of the change as it unfolds before them. I will refer to this change as a dynamic experience of change.

I think the distinction between how we become aware of these two types of change holds in general. The faculties and capacities required to become aware of each kind of change confirms the distinction is warranted. The inference and faculties required for one to be consciously aware of the mere

variation changes are greater than that of dynamic experiences of change. With cases of mere variation, there are perceptual capacities at play, along with an actual conscious judgment and the necessary remembrance of the object in question before one is aware of the object's change. Using the clock example, in order to recognize that the hour-hand has moved on the clock, a subject must consciously recall and judge the hour-hand's position as being different than its current position. The subject is not simply aware of change with mere variation, but must consciously infer the change of the hour-hand's spatial location to be aware of the change. On the other hand, there is the robust case of the second-hand. The second-hand is a more robust, dynamic experience of change, where the subject is simply aware of the change occurring before them. There is only the employment of the perceptual capacities, with no obvious conscious inference involved nor the obvious exercising of memory. While attending to the second-hand of a clock slowly fulfill its intended arc around a clock, one just is simply aware of the second-hand's movement. Conscious judgment and recollection is completely unnecessary for dynamic experiences of change. The clear demarcations between a subject's awareness of change through mere variation and dynamic experiences suggests that the distinction is warranted.

C) Revisiting Hoerl

I think Hoerl's conflation charge against the Dainton-illusionist has merit. How one becomes aware of dynamic experiences of change is such that the subject actual *perceives* the change as it occurs (Le Poidevin, 2007, p. 87). I think Hoerl is right that how we become aware of dynamic experiences of change leaves dynamic experiences of change susceptible to conflation with the Dainton-illusionists 'time-flow' (Hoerl, 2014, pp. 196-198). Hoerl's charge becomes more transparent if we examine a strong claim the Dainton-illusionist can make, i.e. that *every* dynamic experience of change is necessary and sufficient for temporal passage. If we take the example of viewing a street light flickering quickly, say twenty times over three seconds, it is not obvious that this is accompanied with temporal passage. One would have, perhaps several, dynamic experiences of change while watching the intensity of the light increase and diminish to absence. However, it is not obvious that every cyclical change is accompanied with the sensation of temporal passage, of each intensity change passing *through* time. Rather, I contend, there is *no* obvious temporal passage while one is aware of the change. This presents a problem for the Dainton-illusionist because it is through dynamic experiences of change that we have the purported sensation of temporal passage (Dainton, 2011, pp. 391, 398-399). However, it seems quite plausible that not *every* dynamic experience of change is accompanied with temporal passage - but our awareness of the change in question certainly is. Watching the street light flicker can be described purely in terms of *change*, without temporal passage.

If we turn to a weaker claim that Dainton-illusionists can make, I think Hoerl's conflation charge becomes far more clear. The weaker claim could be that only *some* dynamic experiences of change are necessary and sufficient for temporal passage. However, the weaker claim openly intimates that dynamic experiences of change are conflated with, and come apart from, temporal passage. The separation of the two suggests, quite strongly, that there are *two* different types of temporal phenomena being conflated into *one* type of phenomenon. There is the transcending temporal passage phenomenon that comes apart from the phenomenon that is meant to explain it, dynamic experiences of change. I think this helps to justify Hoerl's claim and his rejection of the transcending time-flow. As Hoerl rightly points out, there is only *one* temporal phenomenon occurring when one perceives change as a dynamic experience of change (Hoerl, 2014, p. 197). And if this is so, it is not clear precisely what positing temporal passage adds to the mix. Temporal passage is a distinct psychological phenomenon, if it exists at all, that needs to be explained alongside dynamic experiences of change - *not* through dynamic experiences of change. In this light, Hoerl seems quite right in suggesting that the distinct phenomenology of dynamic experiences of change is susceptible to conflation, and has been conflated with, the transcending temporal passage phenomenon (Ibid.). What is crucial for Hoerl's argument, though, is that temporal passage seems to be left unanswered if the two phenomena can come apart.

I suspect the Dainton-illusionist would respond by objecting that temporal passage occurs with every dynamic experience of change, but the subject is merely unaware of the temporal passage. I do not find this response compelling, at least not without further explanatory work. Based on the nature of dynamic experiences of change, one simply *is* aware of the change (Le Poidevin, 2007, p. 87). One should simply just be aware of temporal passage, too. It is not obvious that temporal passage, and temporal passage alone, would require 'extra attention' from the subject or be opaque to the subject. Even with an extended event, i.e. several successive dynamic experiences of change, one should simply be aware of the temporal passage phenomenon. A subject being aware of dynamic experiences of change, but unaware of the sensation of temporal passage, seems to defy the nature of the experiences that is meant to explain temporal passage. I think this point helps Hoerl's view because it can be maintained that there has been a conflation by the Dainton-illusionist. More importantly, it can be suggested that how we become aware of dynamic experiences of change is susceptible to conflation with time-flow because of the nature of how we become aware of dynamic experiences of change (Hoerl, 2014, pp. 196-197). The rejection of the transcending temporal passage phenomenon can be maintained because it is conflated with dynamic experiences of change.

What I think Hoerl gets wrong is that he does not provide a firm demarcation for what the rejection of temporal passage should amount to. Hoerl, rightfully, rejects the 'time-flow' Dainton-illusionists posit because it is conflated with the types of change involved with dynamic experiences of

change (Ibid.). However, this rejection need not mean that one cannot be aware of time passage in terms of inferring and recollecting change. Like with the hour-hand of a clock, one *can* recollect previous states of affairs and infer from new perceptual data that time is passing, in the sense that states of affairs *are* changing. I see no reason why a subject cannot consciously recollect and infer, after a dynamic experience of change, that clock-time is passing. Nor do I see a reason precluding that one can infer clock-time is passing through inference while undergoing a dynamic experience of change. Moreover, veridicalists should affirm that dynamic experiences of change do have a temporal order and structure; and that due to the immanent directional nature of consciousness, one *becomes* aware of, and can be *no longer* aware of, objects and events. This does not intimate nor offer concessions to the presence of temporal passage. What must be rejected is *only* that we have experiences of a special time-flow. We can become aware of time passage in the sense of inferring that things are changing and recollecting previous states of affairs. With a firmer demarcation, the veridicalist claim is far more wholesome than what is implied with the rejection of temporal passage.

To conclude this section, I want to reiterate the main points of this subsection. Explaining temporal passage through dynamic experiences of change is quite dubious. How we become aware of dynamic experiences of change leaves open the real possibility of mistaking and conflating the nature of our awareness of change with a special time-flow. With this point in mind, veridicalists can still maintain a sense in which we are aware of time passage while rejecting temporal passage. In the next section, I will introduce extensionalism as an account of the phenomenological arrow that veridicalists need.

Section II:

In this section I will provide a brief exposition of extensionalism. I will, then, argue that extensionalism can satisfy certain criteria for introspection by adopting the principle of inheritance. After, I will argue that my construction of extensionalism is a natural fit for veridicalists and will conclude with a brief remark about the simplicity and naive nature of extensionalism.

A) Extensionalism

Extensionalism's fundamental claim is that conscious experiences are essentially extended. The corner stone to the extensionalist model is a metaphysical claim, that consciousness is not instantaneous but is fundamentally extended as, what I will term, a temporally extended unit (Phillips, 2014b, p. 149). This claim is not to be construed as extended for several seconds or more, but rather as the maximum amount of change that a subject can discriminate and be aware of - usually interpreted as about half a second (Hoerl, 2013, pp. 387-388). When an object, or objects, within the temporally extended unit

change sufficiently enough for one to be aware of a discriminable amount of change, the subject has a dynamic experience of change (Ibid.). The lower bound for discrimination and awareness of change is understood as the limits of a subject's capacity and ability to discriminate change (Ibid., pp. 388, 390-391). This explains why a subject cannot become aware of a clock's hour-hand. The hour-hand changes in position too slowly for a discriminable amount of change (Ibid., p. 388). Now, there are dynamic experiences of change with brief durations of no change. One example is the second-hand of a clock, where at very brief, microscopic intervals the second-hand is motionless (Phillips, 2011, pp. 816-817, 821). Extensionalists explain this by appealing to determinability. Determinability is the thought that although there may be very brief durations with indiscriminable change, the subject temporally experiences change because of an overall, sufficient amount of discriminable change (Ibid., pp. 819-821). The subject simply experiences the brief changeless intervals that fall beneath their capacity and ability to discriminate change imprecisely (Ibid.). This is why the second-hand of a clock seems to be in constant motion, with a steady duration of motion, even though it may be motionless at microscopic instants. In short, extensionalists hold that conscious experiences are essentially extended with higher and lower bounds of discriminability.

There is one immediate objection to extensionalism that I would like to dispel. Shouldn't one temporally experience everything, change and objects included, all at once? Not quite. Extensionalism's fundamental claim is that conscious experiences are extended (Phillips, 2014b, p. 149), but *not* that one is aware of, nor that they experience, all of the change and objects within the temporally extended unit simultaneously. Extensionalism's claim is to be understood as the subject temporally experiencing objects and change in relation to the total amount of change of the objects in question (Ibid., p. 150). Our temporal experiences of change are experienced the way they are in virtue of the relations of the changing object, or objects, within the temporally extended unit (Ibid.). We can elucidate this point with several objects of experience, such as hearing Do-Re-Mi, although this line of reasoning can also apply to a single changing object. When one hears the notes Do-Re-Mi, their temporal experience is of the Do-Re-Mi in that particular order, with each note heard in turn, *because* of the changing notes relations within the temporally extended unit. However, one is not aware of, nor temporally experiencing, all of the objects and change all at once. Rather, each object is temporally experienced in turn, in a unified, structured, and ordered manner. Extensionalists only commit themselves to the notion that we are aware of change, and of the objects of experience as they change, as the change unfolds through clock-time within the temporally extended unit.

B: Introspection and Inheritance

With extensionalism exhibited, I can discuss if extensionalism is supported by introspection. Introspection suggests that our perceptual experiences are transparent and that how they seem entails how they actually are. Extensionalism must satisfy these two criteria to be supported by introspection. Transparency is a common assumption in the philosophy of perception, and I will present it neutrally to avoid many of the surrounding debates. Transparency is the idea that introspection on our perceptual experiences suggests the actual objects involved are the objects of perception, without a medium such as sense-data (Prosser, 2016, p. 133). The problem for extensionalists is that they need a supporting view that allows for introspection to suggest that our temporal experiences are transparent to the objects of experience and particular temporal properties, i.e. temporal structure. Turning to seems-is entailment, seems-is entailment is the thought that rational introspection on our temporal experiences cannot seem to us as being one way but actually be another (Phillips, 2010, pp. 183, 186.). We should not be systematically misled about the nature of our temporal experiences, such as there being numerous metaphysical tokens of the same object of experience that is not apparent on introspection (Ibid.). In other words, when viewing a red ball for an extended period, introspection suggests that there is only one red ball tokened and experienced - not several distinct metaphysical tokens of the red ball. In order to be supported by introspection, extensionalism should properly accommodate transparency and seems-is entailment.

One way for extensionalists to meet the challenges of introspection is through adopting the principle of inheritance.² Extensionalists are well aware of perceptual illusions, and I will discuss this shortly, but for simplicity I will discuss inheritance and extensionalism in terms of the veridical cases. Inheritance is the thought that the subject's experience is inherited, as a one-way mirror, from the objective temporal structure of the experience; the subject's experience is *identical* to the objective temporal structure of the experience (Phillips, 2014a, p. 133). The objective temporal structure is constituted by the temporal properties at hand, and the objects of perception, including their relations to one another (Ibid.; Phillips, 2014b, p. 150). The type of temporal properties we are concerned with here are of the immanent directional nature of consciousness,³ and the unity, structure and order of the objects temporally experienced by the subject (Phillips, 2010, p. 189). Returning to transparency and seems-is entailment, inheritance satisfies these requirements easily. Because the subject's experience is inherited from the objective temporal structure, the properties in question, i.e. unity, phenomenal direction, structure and order, and the objects are what the subject's experience corresponds to (Phillips, 2014a, p. 133). The subject's experience is *of*, and transparent to, the temporal properties and objects that are a part of the temporal structure of the experience. Furthermore, the subject's experience seems how it actually

² There is no necessary commitment to adopt inheritance, however I will construct extensionalism with it. See Phillips (2014a) for a defense of the inheritance principle.

³ Phillips suggests an ambiguous 'flow of experience,' which I construe as the inherent directional nature of consciousness for purposes here (2008, p. 189).

is, without positing metaphysically distinct tokens. The temporal structure of a set of objects are *of* the objects in question, being numerically the same (Dainton, 2011, p. 400). The subject's experience is inherited and when the same object is within the temporally extended unit, the temporal structure is experienced by the subject as *of* the same object (Ibid.; Phillips, 2014a, p. 133). With inheritance, extensionalism easily satisfies both transparency and seems-is entailment.

Now, it should be asked, can this view withstand the common vehicle-content conflation objection? This account of extensionalism is highly susceptible to the charge. The charge comes from the representational view of perception and suggests an illicit move, that the representational contents of the experience are conflated with the properties, i.e. perceptual data, that are retained by the vehicle of those contents (Tye, 2003, pp. 90-91; Hoerl, 2017, p. 178-179). I do not think this objection is fatal for extensionalists. The vehicle-content objection only holds force if extensionalists presuppose representationalism and representationalist assumptions. I think extensionalists and veridicalists should turn to the naive realist view of perception to withstand this charge.⁴ Naive realism is the view that the subject stands in metaphysical relation, e.g. spatial perspective, with the objects of perception (Martin, 2006, p. 404). The objects of perception constitute, at least partly, the phenomenological character of the subject's experience (Ibid, p. 354). The claim that is most useful against this charge is the latter claim, that the objects of perception constitute the phenomenological character of the experience. While operating under this assumption, extensionalists are under no obligation to accommodate representationalist views of perception and can reject any explanation is necessary. Rejecting representationalism and adopting naive realism would also help veridicalist ward off illusionist accounts of temporal passage. If veridicalists reject the representational view, veridicalists will have one less worry about temporal passage being represented to the subject. There need not be *any* representation of temporal passage with naive realism. The only thing the subject would perceive would be the objects of perception. Naive realism is perfectly compatible with veridicalism and extensionalism.

With the inheritance principle explicated and introspection secured, we can now briefly turn to the more complicated illusory cases. For clarity, I will refer to the objective temporal structure I mentioned previously as the experiential temporal structure, which the subject inherits. Extensionalists hold that the experiential temporal structure can sometimes mismatch with what should be the actual temporal structure of states of affairs in the world (Phillips, 2014a, p. 133). On the good cases, the experiential temporal structure matches with what the temporal structure should be, resulting in a veridical temporal experience. On the bad cases, the experiential temporal structure mismatches with what the actual temporal structure should be, resulting in an illusory temporal experience (Ibid.). For an

⁴ See appendix note ii for a brief discussion, irrelevant to purposes here, about extensionalism's place between naive realism and representationalism.

example of the bad case, we can use a subject's temporal experience of hearing Do-Re-Mi. An illusory temporal experience of the Do-Re-Mi would be of the experiential temporal structure being of Re-Do-Mi, where clearly the experiential temporal structure mismatches with what should be the actual temporal structure of the event. Generally, one's temporal experience is veridical, but there are illusory cases that warrant the distinction (Phillips, 2014b, p. 142). The illusory cases are typically of postdictive effects, where a set of objects perceived within milliseconds apart produce an illusory temporal experience of the event (Ibid., pp. 150-151). Postdictive effects need not worry extensionalists significantly, as it is quite plausible that the relation of the objects that one temporally experiences is influenced by the amount of objects perceived and the time-proximity of the perception of the objects within one's temporally extended unit (Ibid.). Extensionalists do have viable explanations to explain the illusory cases while keeping the core claims of the view intact.

C) Phenomenological Arrow, Veridicalism, and Extensionalism

I would like to discuss now, in more depth, whether or not the extensionalist view is a viable candidate for the veridicalist view of change and as an account of the phenomenological arrow. I will first discuss the former, and for a clearer discussion, I will assume that the subject's temporal experience is not illusory and will bracket the time-lag issue, i.e. the clock-time it takes for a subject to register an object of experience. On its face, the extensionalist view can be utilized to explain dynamic experiences of change in terms of strictly change. When one temporally experiences change in the form of motion, perhaps the second-hand of a clock, one experiences the second-hand as *moving* and changing spatial locations. On the extensionalist view, this is so because the amount of the change that one can be aware of occurs within the temporally extended unit and the object changes sufficiently enough for the subject to be, non-inferentially, aware of the change (Hoerl, 2013, p. 391). Further, there is a particular uniformity, structure and order to the temporal experience itself. The subject has a unified, continuous temporal experience of the second-hand, with a particular temporal order and structure, as the second-hand apparently moves into each spatial location. This is exactly what veridicalists need to explain dynamic experiences of change. Moreover, veridicalists can maintain that there is an order and structure, in terms of earlier-later, and that the subject can infer time is passing from their awareness of change. While viewing the second-hand's movement, the subject is simply aware of, and can infer that, time is passing as the second-hand changes spatial locations. Veridicalists need only to appeal to extensionalism to explain the dynamic experiences of change.

Turning to the phenomenological arrow, the extensionalist model is a natural fit for veridicalists. The key claim to extensionalism is that conscious experiences are essentially extended (Phillips, 2014b, p. 149). Furthermore, one of the ever present temporal properties of consciousness is that there is a

continual direction, a continual apparent progression through clock-time (Phillips, 2010, p. 189; Dainton, 2010, pp. 29, 116-117). Consciousness need not be construed as anything reminiscent of temporal passage, but rather as an apparent temporal present, continuing onward in a single asymmetric direction. While the temporally extended unit continually progresses onward, one becomes aware of new objects and experiences change, is no longer aware of previous objects, and one's stream of consciousness garners new information about the world asymmetrically. The veridicalist can maintain that one can become aware of, and no longer be aware of, the objects of experience while maintaining their rejection of temporal passage. On the extensionalist view, veridicalists can claim that the phenomenological arrow *is* the subject's temporally extended unit, progressing through clock-time and providing one with a continual stream of consciousness. Moreover, not every experience needs to be a dynamic experience of change. Perhaps one is just sitting in an unchanging room, with no perceptible change. On this view, the phenomenological arrow is still accounted for, and even with no noticeable change present, the subject continues to experience their stream of consciousness continuing on through clock-time. All the veridicalist must affirm is that when dynamic experiences of change do occur, they occur because of an object's change within one's temporally extended unit. Accordingly, extensionalism does adequately satisfy the veridicalist's need to account for the phenomenological arrow.⁵

There is one immediate objection that I wish to dispel against my construction of extensionalism. It could be objected that if the temporal extended unit is continually progressing through clock-time, there could never be a discernible demarcation of the maximum amount of change one can be aware of. I do not think that this sort of objection holds much force. Consciousness is quite dynamic and is always changing, especially in terms of the change that a subject temporally experiences. One can be aware of sufficient amounts of change as the temporally extended unit continues on, but one can *only* be aware of so much change that occurs within the temporally extended unit. However, this does not preclude the possibility that one can be aware of continual successive changes, as consciousness progresses through clock-time. What it does mean, though, is that while the temporally extended unit is continuous, and assuming a continuous dynamic experience of change, the relations of a changing object, or objects, results in a different temporal experience for the subject throughout the duration of the event. Using the example of a clock, one can be aware of a second-hand's movement over several seconds, and can continue to be aware of the movement as it occurs within the temporally extended unit. The subject thus has continuous, but different, temporal experiences of the motion of the second-hand as the spatial locations, and their relations to one another, continue to change. Extensionalists need not worry about this type of objection, and must only affirm that only so much change is discriminable within the temporally extended unit as it progresses.

⁵ See appendix iii for a discussion, escaping purposes here, about the B-theory view of causation and extensionalism.

To conclude this section, I would like to offer one final brief remark about why veridicalists should endorse the extensionalist model. Not only can extensionalism accommodate the phenomenological arrow and dynamic experience of change, but the model is quite simplistic and naive in nature. This is a claim usually championed by extensionalists (Phillips, 2014b, pp. 142-143). Its three core commitments, as I interpret it, are as follows:

- i) Conscious experiences are essentially extended.
- ii) There is an inherited experiential temporal structure with temporal properties.
- iii) The experiential temporal structure matches or mismatches with what the actual temporal structure should be.

(Ibid., pp. 142-143, 149)

With these commitments, the subject's temporal experiences correspond to the experiential temporal structure, in turn, placing the subject in direct contact with the external world. The subject's temporal experience is of the objects of experience changing, as the change unfolds before them in the external world. The only complication that arises is with the bad cases of temporal structure matching, such as postdictive effects. However, the bad cases can be properly accommodated allowing extensionalism to retain its status as a naive and simple model that purports to place the subject in direct contact with the external world. In all, extensionalism places the subject in direct contact with the objects of perception and provides a simple, explanatory account of dynamic experiences of change and the phenomenological arrow.

Section III:⁶

In this section I want to discuss how starting with an explanation of the phenomenological arrow and temporal present can benefit the veridicalist view. I will argue that veridicalists should adopt a different pre-theoretical view of the temporal present, in relation to the B-theory, and a perdurance conception of the self to make their rejection of temporal passage more persuasive. I will speak of illusionism more generally in this section, and expect many of my points to be better received by those who are more neutral on the subject.

A) A Different View of the Debate

I think there is a clear distinction between the two tasks once the A-theory is rejected. Robin Le Poidevin seems to intimate a similar assumption (Le Poidevin, 2015, p. 469). On the one hand, there is

⁶ See appendix iv for a discussion, irrelevant to purposes here, for the intelligibility problem illusionsits face.

the phenomenological arrow, as a seemingly confined present with an immanent asymmetric and directional nature pointing ‘forward’ (Ibid., pp. 467-468). On the other hand, there is temporal passage, where the illusionist claims that we *also* have a sense of temporal passage (Ibid., p. 469). The motivation, I think, for temporal passage is the legacy of, what I will use as an exemplar for present purposes, the traditional A-theory: the future becomes the present, then recedes into the past, corresponding to temporal passage, while the transitive present, corresponding to the temporal present, progresses forward to the future (Williams, 1992, p. 123). However, I think these two tasks come apart. If we simply begin with the phenomenological arrow, all this entails is successive temporal presents. The illusionist, however, needs something more - they need an account of how events pass through time, from the future, to the present, and then into the past (Paul, 2010, p. 333). Temporal passage is of something more than just the phenomenological arrow. Temporal passage is a transcending temporal experience, that must necessarily occur at the confined temporal present, but be *of* the transcending time-flow reminisce of a world with A-theory like time properties (Braddon-Mitchell, 2014, p. 212). Nonetheless, there are *two* separate psychological phenomena requiring two distinct explanations here.

Now I think veridicalists can capitalize on the phenomenological arrow and suggest an alternative pre-theoretical view of the temporal present. Veridicalists should point out that there are two ways to interpret the phenomenological arrow and temporal present. On one, we become aware of successive presents - we become aware of objects and events at the temporal present through successive temporal presents. This, in itself, does not entail the transcending sensation of temporal passage. On the other, objects and events seem to pass through time at the temporal present, as they flow from the future and recede into the past. In spatial terms we can imagine this as looking out the window of a moving car: the former is of us simply becoming aware of, and no longer being aware of, objects and events as *we pass them by* while moving forward, while on the latter we have a sensation of objects and events *passing us by* as we seemingly move forward. Veridicalists should take on the former view and reject the latter view. Veridicalists should point out, much of temporal passage makes sense *only* against the backdrop of the A-theorist view. The assumptions intimate that we have somewhere to move to and away from. Events seemingly pass, *from* the future and *arrive* to the present where we reside, then *recede*, away from us, into the past (Paul, 2010, p. 333). However, as I think veridicalists should maintain, the A-theory has been rejected. Yet, even though the A-theory framework has been rejected, the purported phenomenology of temporal passage has *failed* to follow suit. Veridicalists need to suggest that temporal passage, even if it occurs at the temporal present, is *still* loaded with A-theory assumptions. Many illusionists simply take for granted the embedded A-theory assumptions on the B-theory view.

I think that a part of the problem with temporal passage intuitions is how we think of ourselves against the backdrop of the traditional A-theory. Against the A-theory assumptions, we think of ourselves

as enduring through time: we persist and extend through time, with ourselves being wholly present at a particular point in time (Velleman, 2006, p. 4). This conception is clearly against a backdrop of A-theory assumptions and neglects the temporal aspects of how we conceive the self. However, I do not think this matches with how we think of ourselves on the B-theory. On the B-theory, we think of ourselves as perduring through time, as existing in space with temporal parts (Ibid., pp. 3, 5-6). Through how we imagine ourselves, in the past and in the future, we conceive of ourselves as illusorily extending through time (Ibid., pp. 5-6). Consider a drive that you have taken yesterday. While remembering the drive, there are two “I’s,” conflated into one “I” (Ibid., pp. 5-6). You think of yourself, from your own perspective, as driving - only in the past. However, without handling the phenomenology with care, we are highly prone to conflate the current self - the imagining self - with the perspective we have of ourselves existing in the past (Ibid.). These are two separate selves, though, being conflated into one self that exists *only* at the current imaginative project (Ibid.). This gives us a sense of ourselves extending through time, as an illusory extended self, intimating temporal passage (Ibid., pp. 13-14). When we recognize this, it becomes clear that we do tend to think of ourselves against the traditional A-theory assumptions even though B-theorists have rejected those assumptions. Accordingly, once we recognize and reject the illusory extended self, we can reject temporal passage and the misguided underpinning intuitions (Ibid.).

With the debate framed this way, I think veridicalists fare much better against temporal passage. We can return to Hoerl’s claim to explain the apparent time-flow involved. Recall, Hoerl thinks that how we become aware of dynamic experiences of change is susceptible to conflation with a special time-flow, as Dainton-illusionists have mistakenly done (Hoerl, 2014, pp. 196-197). Now, if we consider that *many* of our everyday experiences are of dynamic experiences of change, Hoerl’s case seems quite reasonable. The phenomenology of temporal passage could very well rest on the neglected structure of how we become aware of dynamic experiences of change - resulting in the systemic, yet mistaken, impression that there is a special ‘time-flow’ involved (Ibid.). Moreover, when the legacy of the A-theory is rejected, and the temporal parts of how we think of the self as extending through time is illuminated, the veridicalist case is much more plausible. Without proper care taken of how we become aware of dynamic experiences of change, this only encourages misleading intuitions about the sensation of temporal passage (Ibid., p. 197). Now, all veridicalists must affirm is that we have a privileged temporal present, rejecting an illusory property of present, in virtue of which we have an indexical ‘now’ where our temporal experiences occur. I have constructed extensionalism, with the temporally extended unit, as a perfect candidate for this view. Moreover, veridicalists can maintain that we *do* become aware of new objects and events, and can no longer be aware of them, because of our temporal experiences and the immanent direction of consciousness, but *not* because of temporal passage.

Perhaps an objection could be made to my discussion thus far by appealing to obvious temporal experiences of the apparent ‘slowing’ and ‘speeding up’ of time. It seems quite plausible, indeed, that while waiting for the bus one’s temporal experience seems to slow. However, I do not think this objection holds much force as evidence of time passage if veridicalists appeal to executive thoughts (Phillips, 2012, pp. 289-291). Executive thoughts are higher-order thoughts about things that require ‘extra’ mental activity (Ibid.). The thought is that as more executive thoughts flood one’s stream of consciousness, the more that our temporal experiences of change can seem to slow; on the converse, our temporal experiences seem to speed up (Ibid.). Temporal experiences need not apparently slow down because of apparent time-flow, but rather because of the amount of mental activity and executive thoughts that a subject has (Ibid., pp. 297-298). An appeal to executive thoughts, very well, helps veridicalists to explain these types of phenomena while simultaneously closing off an illusionist’s suggestion of temporal passage. Moreover, appealing to executive thoughts is compatible with a veridicalist extensionalist view and recollection-inferential awareness of time passage. Veridicalist extensionalists need not commit to the idea that the consciousness, in objective clock-time terms, has a slower rate - only that one’s temporal experiences of change seem to them to have a slower or quick rate. If veridicalist extensionalists appeal to executive thoughts, they can maintain their rejection of temporal passage while providing an adequate response to a subject’s perceived rate of change.

Conclusion:

In my dissertation I set out to answer the question, can extensionalism accommodate the veridicalist rejection of temporal passage? I answered this question in the affirmative. I began by framing the current debate, and bolstered Christopher Hoerl’s veridicalist view and suggested that there is a sense in which we can be aware of time passage. Then, I constructed extensionalism as a viable view of the phenomenological arrow that is compatible with veridicalism. In the last section, I explored how a different approach to the temporal present and a perdurance conception of the self can aid the veridicalist position. I want to conclude my dissertation with a next step I think veridicalist extensionalists should make. I think veridicalist extensionalists should relinquish the dogma of William James’ Specious Present Theory and use more neutral language to describe extensionalism. This has been suggested by others,⁷ yet James’ legacy persists with extensionalists.⁸ An attentive viewer familiar with the literature will notice that I have used more neutral language than is frequently employed by extensionalists. The motivation of James’ theory was to explain illusory temporal passage through dynamic experiences of change; what he terms as the specious present I referred to as the temporally extended unit (James, 1950,

⁷ See: Callender, (2008).

⁸ See: Phillips (2008, 2012), Hoerl (2014); Dainton (2010, 2011).

pp. 620, 630). Extensionalists should champion the view as a means of explaining the phenomenological arrow and change instead. Moreover, it is not clear what is specious on the extensionalists view, except for the bad cases of temporal structure matching. I do not think that extensionalism needs to be affected so largely by the legacy of James' work any more, especially if extensionalism is construed as a story about the phenomenological arrow and temporal present. Extensionalism should be viewed just as it is, as a fundamental view about our temporal experiences, change, and how our temporal experiences relate us to the external world.

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Appendix:

i) A Different View of Dainton

In Christopher Hoerl's paper discussing his rejection of temporal passage, he briefly notes a plausible and different view of Dainton's view. Hoerl thinks that it is quite plausible the flow involved is of a different type of 'flow,' not necessarily temporal passage (Hoerl, 2014, p. 199, footnote 10). It is reasonable, as Hoerl supposes, that this could be the case. Dainton himself refers to it as a type of 'phenomenal flow' at some points (Dainton, 2011, pp. 398-399). However, I think there is a preponderance of evidence suggesting that what Dainton has in mind is, indeed, temporal passage. First, the title to Dainton's contribution to the *Oxford Handbook of Philosophy of Time* is "Time, Passage, and Immediate Experience" (Dainton, 2011). Moreover, Dainton discusses temporal passage and flow several times. He writes: "Might we not be *projecting* passage onto the world in the same way as we project colour?" (2011, p. 383); "Because I am *directly aware* of the passage of time" (Ibid., 384); and, after discussing dynamic experiences of change (Ibid., p. 404), Dainton writes: "There are also dynamic conceptions of time, conceptions which, in one way or another, find room for temporal passage... Might it

be that the appearance of passage can be accounted for in easier or more compelling way if passage is in fact real?" (Ibid., p. 405); all italics Dainton's. It is a fair move, as Hoerl suggests, to leave Dainton the room to suggest a different type of flow than temporal passage, but it is quite reasonable to presume that Dainton does, indeed, have the special time-flow in mind. I will assume this here for the purposes of my dissertation. Either way, as Hoerl rightfully notes, whatever flow Dainton does have in mind is an anti-reductionist flow, i.e. that the flow transcends more than what is just present in change (Hoerl, 2014, p. 199, footnote 10). The arguments I will put forth apply to either equally.

ii) Discussion on Extensionalism's Place Between Representationalism and Naive Realism

In my dissertation I am advocating for the naive realist view. However, it is not so clear that extensionalism should be monopolized by the naive realist view. As I have construed extensionalism, with the inheritance principle, it is quite obvious that naive realism is a natural fit for the view. The idea of temporal structure and order, especially with the 'inheritance of objects of perception' is quite compatible with the naive realist view, that the objects of perception constitute, in part, the phenomenal character of the objects in question (Martin, 2006, p. 404). With this said, I do not think this precludes the possibility of representationalists endorsing an extensionalist view. The other popular view for how we perceive dynamic experiences of change is the representationalism view. I do not want to get too in-depth with this view for the discussion at hand, but the rough idea is that consciousness has, in a sense, temporal breadth (Dainton, 2011, pp. 392-393, 401-402). Consciousness is not extended but is instantaneous - with distinct metaphysical instants with retentions, of a previous states of affairs, and protensions, of anticipated states of affairs, of the objects of experience as consciousness progresses (Ibid., pp. 401-402). In spatial terms, one can think of this view as discrete temporal blocks along an X-axis, with depth along the Y-axis. The rough idea with the retentions is that with each metaphysical instant, we are simultaneously aware of the previous states of affairs of the world through special 'retentions' that are somewhere in between memory and the current perceptual state - until the retention drifts away and the perceptual data is committed to memory; the protensions exist as anticipations of future states of affairs (Dainton). Now, this view may be susceptible to the vehicle-content distinction and would likely have to reject the principle of inheritance. I do not think this would be fatal to the endorsement of extensionalism, though.

I think representationalists could affirm that there is some sort of access we have to the phenomenal character of events while still rejecting that one necessarily has access to information stored in the vehicle. I think representationalists could plausibly stay silent on that front. We can use Roache's definition of conscious perception to elucidate this point. Roache thinks that there are two senses of

perception. On the one hand, there is perception that is perceptual information that reaches our brain (Roache, 1999, p. 234). On the other, there is conscious information that is available for conscious reflection (Ibid.). The former is unavailable for reflection while the latter is. I think if Roache's definition is used then there need not be any mention of the vehicle. The unavailable information could be strictly the information retained with the vehicle, while what is consciously perceived is available to the subject upon rational reflection. Roache takes it that there is a perceivable temporal order to events under the conscious perception view (Ibid.). I think representationalists could plausibly use this while staying quiet on the vehicle front. Perhaps, on this view, extensionalism may be compatible with representationalism. Nonetheless, there are other representationalists that have adopted the notion of an extended consciousness, such as Lee's quasi-extensionalist view (Lee, 2014). Simon Prosser considers Lee's view as having an extended vehicle, but as an atomist view of consciousness (Prosser, 2016, p. 137). It is quite clear that there is some use of extensionalism between the representational view, and should not be immediately ruled out as a theory compatible with extensionalism.

iii) Temporal Order and Causation on the B-Theory view

Robin Le Poidevin suggests that our temporal order can come from a B-theory view of causation. Accordingly, there is a causation, in terms of x causing y with the relation of x as earlier and y being later, to which we can be aware of through perception and which determines the asymmetric content and temporal order of the phenomenological arrow (Le Poidevin, 2015, pp. 467-469). With extensionalism as I have construed it, this is perfectly compatible with this view of causation on the B-theory. However, there are two notes that I would like to make concerning Le Poidevin's discussion. Le Poidevin takes it that this view of causation *is* what determines the asymmetric nature of our temporal experiences and the temporal order of our temporal experiences (Ibid., 467-468). Le Poidevin also uses this as a view to support the cinematic view of perception, roughly that we derive a 'time order' of events from our perceptions of those events and the influence of remembered events on perception, ultimately affecting the current phenomenology of a perceptual state (Ibid., p. 468). This, in turn, gives one an idea of time order of events (Ibid.).

I do not find Le Poidevin's reasoning persuasive for several reasons. On the cinematic view, I do not find it compelling to distinguish between an experience of succession and a mere succession of experiences (See Hoerl, 2014, for a longer discussion). Moreover, I think the temporal order and immanent directional nature of consciousness are temporal properties and are more than mere effects of the causal theory. When we take the example of mismatching temporal experiences, the illusory cases, we seem to have a temporal order and asymmetric directional nature of consciousness *contrary* to the explanation that Le Poidevin provides, of the order in which our perceptions occur (Le Poidevin, 2015, p.

468). On the mismatching cases the asymmetric directional nature, temporal structure, and temporal order of an event mismatches with the actual perceptions of that event. Lastly, Le Poidevin's account of the phenomenological arrow is by and large missing what Dainton has termed the confinement doctrine (Dainton, 2010, p. 29). Le Poidevin has left this rather ambiguous, rather opting to just suppose mere 'changing perceptual states' is enough of an explanation for the confinement doctrine (Le Poidevin, 2015, pp. 467-468). Accordingly, I find the extensionalist view with more tools available, and the temporal properties therein, to explain temporal experiences comprehensively.

iv) Error-Theory Problem:

One point Hoerl makes is that if temporal passage is construed as an error-theory about perception, temporal passage faces the intelligibility problem. The idea is that it is unclear what it would mean to suggest a purported mind-independent phenomena, i.e. temporal passage supposedly accommodating A-theory like properties, that does not exist (Hoerl pp. 189-190). After all, if there is no such thing as a property of temporal passage, how can we articulate what it is like for there to be such a sensation of temporal passage (Ibid.)? One merit to this position, as Hoerl notes, is that temporal passage would place us in a systematic illusory state that does not correspond to the actual state of affairs in the world accurately (Ibid., p. 189). I think part of what Hoerl misses is what I have suggested in section three, that all we can be aware of is at the present, and of, the temporal present. So, passage must occur at the present. But, it's not particularly clear how temporal passage can occur if everything at the temporal present *is*, simply, present. Nonetheless, the illusionist faces two challenges from Hoerl's criticism. First, they must try to explicate the notion of a mind-dependent temporal passage property that purports to correspond to a non-existent mind-independent temporal passage property. Second, the cost of the view should be seriously considered. If every event we temporally experience is meant to encompass temporal passage, somehow, then this means that our overall temporal experiences are, indeed, systematically misleading. This challenge seems unappealing simply because our perception of the world is *not* veridical to the actual states of affairs of the world - depending on the strength of illusionism one espouses.

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